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a resistance system connected with the movement arm units that provides resistance to rotation of the movement arm units as they move from the extended position to the curled position;

wherein the elevation of the seat and the support pads are such that, when a user is seated and the user's elbows or upper arms engage the support pads, the user's upper arms are angled upwardly from shoulder to elbow at an angle of at least 5 degrees.

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**REMARKS**

**I. Status of the Claims**

Claims 1-38 are pending. Claims 1-4, 10, 12, 24-27, 29, 32, 33 and 35-38 stand rejected under Section 102(b). The remaining claims stand rejected under Section 103(a). Claim 33 has been amended hereinabove to more particularly recite the invention.

**II. The Section 102(b) Rejections**

The Action states that Claims 1-4, 10, 12, 24-27, 29, 32, 33 and 35-38 are anticipated under Section 102(b) based on the disclosures of a brochure entitled *Time Machines by Nautilus* (Time Machines). More specifically, with respect to Claim 1, Time Machines is characterized as disclosing, *inter alia*:

an exercise machine comprising a frame, a seat mounted to the frame, a pair of support pads mounted to the frame being positioned to engage one of the upper arms and elbows of a seated user, and being movable between an extended position in which the user's arms are substantially straight, and a curled position in which the user's arms are bent, the axes of rotation forming an angle of between 115 and 155 degrees, and a resistance system connected with the movement arm units that provides resistance.

The Action at para. 2. With respect to Claim 24, the Action states that Time Machines discloses:

an exercise machine comprising a frame, a seat mounted to the frame, a pair of support pads mounted to the frame being positioned to engage one of the upper arms and elbows of a seated user, and being movable between an extended position in which the user's arms are substantially straight, and a curled position in which the user's arms are bent, the axes of rotation forming an angle of between 115 and 155 degrees, a weight stack, a first cable connected with the movement arms, a second cable connected with the weight stack, and pulleys.

The Action at para. 9. With respect to Claim 33, the Action states that Time Machines discloses:

an exercise machine comprising a frame, a seat mounted to the frame, a pair of support pads mounted to the frame being positioned to engage one of the upper arms and elbows of a seated user, and being movable between an extended position in which the user's arms are substantially straight, and a curled position in which the user's arms are bent, a resistance system connected with the movement arm units that provides resistance, wherein the elevation of the seat and support pads are such that when a user is seated and the user's elbows or upper arms engage the support pads, the user's upper arms are angled upwardly from the shoulder to elbow at an angle of greater than 5 degrees.

The Action at para. 15. The Action cites a biceps curl machine pictured in Time Machines at pages 22-23 for support of these positions.

In response, Applicants respectfully direct the Examiner's attention to the Declaration of Gregory M. Webb (the Webb Declaration), a copy of which is attached hereto. The Webb Declaration states that the biceps machine illustrated in Time Machines was constructed such that the pivot axes defined by the movement arms was approximately 90 degrees. *See* the Webb Declaration at para. 4. Also, the frame sections to which the movement arms were mounted define an angle of approximately 90 degrees. *Id.*

Turning now to the pending claims, Claim 1 recites, *inter alia*, that axes of rotation of the movement arms form an angle between about 115 and 155 degrees (this angle is exemplified by the angle  $\gamma$  in Figure 6 of the specification). Because Time Machines does not disclose a biceps curl machine that meets this recitation, this reference cannot anticipate

the claimed subject matter, and Applicants respectfully request that the rejections of Claim 1 and claims dependent thereon under Section 102(b) be withdrawn.

Similarly, Claim 12 recites, *inter alia*, that the frame includes uprights and legs that define generally vertical planes, and that the generally vertical planes define an angle of between about 20 and 70 degrees (this angle is exemplified by the angle  $\alpha$  in **Figure 6** of the specification). Because Time Machines does not disclose a biceps curl machine that meets this recitation, this reference cannot anticipate the claimed subject matter, and Applicants respectfully request that the rejections of Claim 12 and claims dependent thereon under Section 102(b) be withdrawn.

Finally, Claim 33 now recites, *inter alia*, that the axes of rotation of the movement arms form an angle between about 115 and 155 degrees. Applicants submit that the rejections under Section 102(b) of Claim 33 and claims dependent thereon be withdrawn for the same reasons as set forth above in connection with Claim 1.

### **III. The Section 103(a) Rejections**

The Action cites Time Machines alone as rendering Claims 5, 7-9, 11, 28, 30, 31 and 34 obvious under Section 103(a), and Time Machines in combination with U.S. Patent No. 5,181,896 to Jones (Jones) as rendering Claims 8, 9, 11, 13-23 and 31 obvious under Section 103(a). The biceps curl exercise machine disclosed in Time Machines has been described above and in the Webb Declaration. Jones is directed to an inclined press exercise machine (which exercises the chest and triceps muscles of the exerciser, not the biceps muscles as is the case for the present invention) and is cited only for having a frame with front and rear uprights.

Applicants respectfully submit that neither Time Machines alone or in combination with Jones suggests the recited exercise machines. Clearly, the recitations of the angular relationships between the pivot axes of the movement arms (in Claims 1, 24 and 33) and between the planes defined by the uprights of the frame (in Claim 13) are not disclosed in either of these references. As the Webb Declaration discusses, the Time Machines exercise machine had significant shortcomings, particularly for small and average-sized exercisers, and has not been manufactured for at least twenty-five years. See the Webb Declaration at para. 5. Typical biceps curl machines currently offered have pivot axes that are collinear. *Id.*

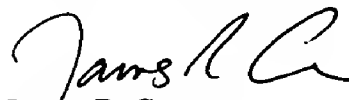
at para. 6. The employment of the angular relationships recited in the claims can overcome the deficiencies of the Time Machines exercise machine and significantly improve the effectiveness and comfort of biceps curl machines. *See* the Webb Declaration at para. 7.

In view of the foregoing, Applicants respectfully submit that it would not have been obvious to the ordinarily skilled artisan to conceive the subject matter recited in the claims. Time Machines discloses only one biceps curl machine design, a design that had severe shortcomings. Other biceps curl machines tend to employ collinear pivot axes for their movement arms. The undesirability of the Time Machines device and the modern trend in biceps machines teach away from the use of non-collinear pivot axes for the movement arms; nevertheless, Applicants discovered that, by utilizing non-collinear pivot axes with the recited angular relationships, a more effective biceps curl exercise machine could be created. As such, Applicants respectfully request that all rejections under Section 103(a) be withdrawn.

#### IV. Conclusion

The concerns of the Examiner having been addressed in full, Applicants respectfully request withdrawal of all outstanding rejections and the issuance of a Notice of Allowance forthwith. The Examiner is encouraged to address any questions regarding the foregoing to the undersigned, who may be reached at (919) 854-1400.

Respectfully submitted,

  
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#### CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231, on April 30, 2003.

  
Joyce Paoli



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**Version with Markings to Indicate Changes**

Please amend Claim 33 as indicated.

33. (amended) An exercise machine for exercising the biceps muscles of a user, comprising:
- a frame configured to rest on an underlying surface;
  - a seat mounted to the frame and configured to receive a seated user;
  - a pair of support pads mounted to the frame forwardly of and above the seat, each of the support pads being positioned to engage one of the upper arms and the elbows of the seated user;
  - a pair of movement arm units pivotally interconnected with the frame and movable about respective generally horizontal axes of rotation, each of the pair of movement arm units being configured to engage at least one of the forearms and the hands of the user, each of the pair of movement arm units being movable between an extended position, in which the seated user's arms are substantially straight, and a curled position, in which the user's arms are bent, the axes of rotation forming an angle of between about 115 and 155 degrees; and
  - a resistance system connected with the movement arm units that provides resistance to rotation of the movement arm units as they move from the extended position to the curled position;
- wherein the elevation of the seat and the support pads are such that, when a user is seated and the user's elbows or upper arms engage the support pads, the user's upper arms are angled upwardly from shoulder to elbow at an angle of at least 5 degrees.